Claims

What is claimed is:

1. A method for performing an assay, comprising:

substantially simultaneously evaluating the presence of a plurality of analytes in a sample, at least one analyte of the plurality of analytes having known parameters indicative of an acute metabolic or disease state;

substantially simultaneously determining concentrations of each of the plurality of analytes in the sample;

continuing the substantially simultaneous determination until the at least one analyte has been reliably determined to be present in an amount indicative of the metabolic or disease state; and

reporting said reliable determination of the presence of the plurality of analytes in an amount indicative of the metabolic or disease state.

2. The method according to claim 1, wherein the detection of at least one other analyte in the sample continues after the report of the reliable determination of an amount indicative of the acute metabolic or disease state in order to accurately determine the presence or concentration of the at least one other analyte.

3. The method according to claim 1, comprising evaluating binding of the plurality of analytes to corresponding reactive elements over a plurality of time points.

4. The method according to claim 1, wherein the substantially simultaneous determination is effected by reacting at least one analyte of the plurality of analytes with a corresponding reactive element.

5. The method according to claim 4, wherein the substantially simultaneous determination includes exposing the sample to the reactive elements corresponding to each analyte of the plurality of analytes.

6. The method according to claim 5, wherein each reactive element is substantially immobilized on a waveguide surface.

7. The method according to claim 4, wherein the continuation of the substantially simultaneous determination includes correlating a rate of reaction between the at least one analyte and the corresponding reactive element to a concentration of the at least one analyte.

8. The method according to claim 7, wherein the reactive elements are arranged in one or more patterns on the waveguide surface.

9. The method according to claim 4, wherein the substantially simultaneous determination includes introducing a light beam including at least one wavelength appropriate for stimulating a light signal from the corresponding reactive element when the corresponding reactive element has coupled with the at least one analyte.

10. The method according to claim 9, wherein the light signal is indicative of a rate of reaction between the analyte of interest and the corresponding reactive element.

11. The method according to claim 10, wherein the substantially simultaneous determination includes measuring the light signal generated from the reaction of the at least one analyte with the corresponding reactive element.

12. The method according to claim 10, wherein the continuation of the substantially simultaneous determination includes correlating a rate of reaction between the at least one analyte and the corresponding reactive element to a concentration of the at least one analyte.

13. The method according to claim 1, wherein the at least one analyte is a marker released from cardiac tissue only after a myocardial infarction.

14. The method according to claim 13, wherein the marker comprises myoglobin.

15. The method according to claim 1, wherein the at least one analyte is a cardiac specific marker.

16. The method according to claim 15, wherein the at least one analyte comprises troponin.

17. The method according to claim 16, wherein the troponin comprises individual troponin subunits.

18. The method according to claim 16, wherein the troponin comprises a complex including at least one troponin subunit.

19. The method according to claim 16, wherein the troponin comprises at least one of native troponin and a modified troponin.

20. The method according to claim 15, wherein the at least one analyte comprises creatine kinase.

21. The method according to claim 20, wherein the creatine kinase comprises CK-MB.

22. A method for performing an assay, comprising:

substantially simultaneously evaluating the presence of a plurality of analytes in a sample by exposing the sample to reactive elements that correspond to each analyte of the plurality of analytes, each of the reactive elements capable of being stimulated to emit a signal indicative of binding of that reactive element with a corresponding analyte of the plurality of analytes, at least one analyte of the plurality of analytes having known parameters indicative of an acute metabolic or disease state;

substantially simultaneously determining concentrations of each of the plurality of analytes in the sample by stimulating the reactive elements that are bound to their corresponding analytes, measuring an emitted signal corresponding to each type of reactive element, and correlating the measured signal to a concentration of the corresponding analyte;

continuing the substantially simultaneous determination until the at least one analyte has been reliably determined to be present in an amount indicative of the metabolic or disease state; and

reporting said reliable determination of the presence of the plurality of analytes in an amount indicative of the metabolic or disease state.

23. The method according to claim 22, wherein the signal comprises a light signal.

24. The method according to claim 22, wherein the detection of at least one other analyte of the plurality of analytes continues after the report of the reliable determination of the amount indicative of the acute metabolic or disease state to accurately determine the presence or concentration of the at least one other analyte.

25. The method according to claim 22, wherein at least one analyte of the plurality of analytes is a marker released from cardiac tissue only after a myocardial infarction.

26. The method according to claim 22, wherein the signal is measured over a plurality of time points.

27. The method according to claim 22, wherein at least one analyte of the plurality of analytes is a cardiac specific marker.

28. The method according to claim 22, wherein at least one analyte of the plurality of analytes comprises troponin.

29. The method according to claim 28, wherein the troponin comprises individual troponin subunits.

30. The method according to claim 28, wherein the troponin comprises a complex including at least one troponin subunit.

31. The method according to claim 28, wherein the troponin comprises at least one of native troponin and a modified troponin.

32. The method according to claim 22, wherein at least one analyte of the plurality of analytes comprises creatine kinase.

33. The method according to claim 32, wherein the creatine kinase comprises CK-MB.

34. The method according to claim 22, wherein the reactive elements are substantially immobilized upon a surface.

35. The method according to claim 34, wherein the reactive elements are arranged in one or more patterns upon the surface.